

# What are the benefits of the industrial placement?

## Here's what some of our current students say.....

### **Tom Rosier, RWE Npower**

During my third year placement with RWE npower renewables, I worked in the offshore civil structures team. I was responsible for carrying out a variety of tasks in support of their Offshore Wind Farms, from fatigue checks on existing structures, to tackling problems with the construction of the new Gwynt y Môr offshore wind farm. The highlights were spending weeks offshore, on heavy lift crane vessels. As part of the Site Team, I was working around the clock to support installation of turbine foundations. The placement taught me invaluable real-world lessons that I could bring back to my Research and Design projects to support the engineering work on the course, and the value of teamwork under pressure. I am also now pursuing a career in offshore wind.

### **Peter Collen, Rolls-Royce**

During my placement year I was lucky enough to complete two 6-month rotations. The first was in a very technical, analytic role, which really developed both understanding of engineering fundamentals and problem solving skills in general. The second was design-based, and allowed me to practice both conceptual design and the process of turning the requirements for the project into solid targets to work towards. Being an intern doesn't mean you get to hide behind the fact that you're still a student; I was treated as an equal member of the team. The best example of this was that the assembly on which we were working had three main, very similar components: two of these were each assigned to a full engineer, whilst I was working on the third with equal responsibility.

Choosing a course with a placement year was by far one of the best decisions I made when applying to university. Not only does working in industry allow you to cement your academic learning with practical experience, it also ensures you can develop skills that are difficult to acquire in university, such as project management and presenting key information to stakeholders and customers. The main benefit when graduation looms (aside from the likely possibility of a sponsorship or guaranteed job straight out of university) is actually having some real experience to put on your CV. At last, the spot on your résumé long-occupied by 'newspaper round' can be replaced by some relevant, hard experience that instantly places you ahead of the competition. As an extra advantage, all of the partners to the Engineering Design programme are exceedingly well known in their fields, ensuring that a potential employer will recognise the quality of experience that you've acquired.

### **Anna Gasslbauer, Arup**

During my placement with Arup, I have been working on the structural design of a large luxury residential development. The project uses a post-tensioned concrete frame, a construction method that can greatly reduce the volume of concrete and steel used in a structure and is therefore significantly more economic and sustainable than conventional reinforced concrete. Post-tensioning is comparatively new to the UK construction industry, meaning that my in-depth experience of this type of structural design has allowed me to become an expert in an increasingly more desired skill set. Having the opportunity to be part of a real engineering team and to work on such a challenging project has been a very rewarding experience and of great value to my professional development.

### **Ignacio Garcia Leon, DNV GL**

During my placement with DNV GL, I have been responsible for the development and optimization of a modelling tool which provides estimates of economic and power performance for offshore wind farms. This will enable the company to reduce the costs of assessing the viability of offshore wind projects and to improve the quality of their evaluations.

Having sole responsibility for the project is giving me experience of leading meetings with my team and engineers from other departments. I am required to propose and implement new ideas, evaluate inputs from colleagues and ensure that client requirements are being satisfied. Through this work, I am gaining a

valuable understanding of the information required to bring together a successful large-scale interdisciplinary project.

### **Lara Tulloch, Frazer-Nash**

During my placement with Frazer-Nash Consultancy, based in the Marine Technology department, I have worked on a variety of exciting engineering projects. My work included designing and analysing protective equipment for flight deck paraphernalia aboard the Queen Elizabeth Class aircraft carriers. The purpose of this is to protect flight deck equipment from the high pressures and temperatures experienced by the aircraft as they traverse across the flight deck. I have also worked on a complex mathematical modelling project where I learnt to code in VBA (Visual Basic for Applications).

It has been a challenging yet rewarding experience and the opportunities which I have had were far greater than I ever imagined. Responsibilities have included presenting designs to senior engineers within the company as well as clients. I gained invaluable skills throughout the year and I have greatly improved my graduate prospects.

### **Matthew Mew, Babcock International**

The opportunity of a year in industry is a great privilege that every student should strive to experience. Industrial experience allows you to put your education into practice but more importantly it offers you guidance as to what you need to improve on when you return to your studies (and this most likely won't be academic). Not only does the experience give you a couple of leaps up the employability ladder, it puts you in a favourable position returning into year 4 as unlike most students, you'll know what you want to do with your life!

### **Charly Capon, Atkins Aerospace**

An industrial placement presents many opportunities to apply and improve upon the content you learn during your first and second years at university, but I think it is the opportunity to develop yourself professionally that brings the most value. At Atkins, I have been given responsibility of people and projects and have been lucky to be involved in a variety of interesting projects with clients such as Airbus and GE Aviation. I've learned to be commercially aware and I now appreciate some of the challenges the nature of consulting work can bring. A year in industry helps you to understand better the things that really do interest you and can often help to identify those things that don't, which is so important when considering your future career path.

### **Patrick Gregory, GKN Aerospace**

On placement with GKN Aerospace, based at the National Composites Centre, I have been working on the AFLoNext project. This is an EU-wide project looking into drag, load and noise reduction through a number of advanced control technologies and new designs. My own work forms part of an effort to develop Hybrid Flow Control techniques, which means looking into controlling airflow both around and through an aerofoil. I have focused on the development of bonding techniques between metallic and composite parts by creating test plans, manufacturing test specimens and other project responsibilities, such as presenting and reporting. The placement has been a great way to experience managing a real engineering project and putting some of the theory from the course into practice.

### **Fiona Marsden, DCA**

During my year placement at DCA, I worked on a number of projects in a team of engineers, designers and researchers. My work primarily included concept generation, CAD development, prototyping and preparing client presentations. As my placement progressed I gained responsibility and was involved in many client meetings, including overseas travel. I learned a huge amount from my colleagues at DCA, and from contact with clients.

### **Matthew Mears, Rolls-Royce**

My time within Rolls-Royce has given me an excellent insight into the real world of engineering. I have been treated as a graduate engineer, working on both civil and defence programmes. These included development of the engine architecture for the UltraFan project and an aerodynamic study of Future Combat Air Systems (FCAS) engines. The experience has been invaluable for increasing my technical ability ready

for my final two years of academic studies. It has also given me the opportunity to improve my communication skills and an understanding of how large-scale engineering projects are run.

### **Mark Libby, The Manufacturing Technology Centre (MTC)**

My placement at The MTC has been an invaluable experience as part of my time at university. I cannot stress enough the value of working in the engineering industry as part of preparing for a full-time job after your degree. During my placement I was given the opportunity to work on a project from beginning to end, which allowed me to take part in almost every activity that you can expect to find in an engineering project. I was able to dictate the level of work and responsibility that I was assigned, permitting me to control my workload to balance other commitments. I was also part of an intern project in which I was the team leader of the group, directing the efforts of the other placement students as well as myself towards achieving the goals that we had set. Taken as a whole, the year in industry has set me up to be much better prepared for my final years of university than the majority of students who don't take a sandwich course.

### **Ed Cooper, GE Dowty**

During my industrial placement with GE Dowty, I was responsible for qualifying a new carbon fibre for use in aerospace components. In this role I designed and made test specimens and tooling, carried out in-depth analysis and was trusted to manage business critical aspects of the project. The combination of hands-on and managerial tasks involved in this project helped to develop my skills in many disciplines while the responsibility built my confidence; throughout my time with the company, my ideas were welcomed and acted upon in the same manner as they would have been from a graduate engineer.

### **Thomas Winton, Atkins Aerospace**

During my placement with Atkins Aerospace, I developed a new internal designer check sheet process. This has enabled designers to more efficiently document their work, and communicate this for quality control and auditing purposes. The project brought together skills gained at university, including: breaking down a task, identifying requirements, and delivering it to schedule and to budget. The process was adopted across Atkins Aerospace and the project was a great way to learn more about design processes within industry, as well as developing my project management and communication skills.

### **Elly Reeves, E3**

During my placement with E3, a building services company in Bath, I have been involved on a project in Bristol to develop what was the Bank of England building into a new luxury hotel. As well as the office work, I've also had the chance to explore the old building which was very useful to see how the current building services function and to identify what needs to be done to convert it from an office/bank into a hotel. I have also worked on a wide range of other projects, from schools to cafés, and have gained an appreciation of the different services required for each situation. One of E3's core principles is sustainability which we achieve by refining the design to reduce the need for energy intensive services such as heating and lighting.

### **Eloise Myers, Babcock**

During my 12 month placement at Babcock International I have worked within the Research and Development team. I have worked on a number of different naval projects, including researching new innovative solutions and acting as the project lead on tasks with external suppliers. Throughout my placement I have been able to visit manufacturing sites and have been on board dry docked ships. One project enabled me to see the process of designing a new product from initial idea to final prototype and I was present at the water ingress testing on a Naval Gun in Devonport. Another project enabled me to design my own product, which is due to be manufactured and tested in the next few months.

I have greatly enjoyed my placement and have developed several important skills along the way. I would hugely recommend completing a placement, as I have gained knowledge of the engineering design environment which will benefit my studies and further career.

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